

Illinois Forests



"The Voice for Illinois Forests"

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2019 Illinois Forestry Association Board of Directors

Executive Committee

PRESIDENT

Mike McMahan (Region 4)
Vienna, IL
618/977-3415
mcmahan3465@hotmail.com

VICE-PRESIDENT

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Boaz, KY (Benton, IL)
270/704-2687
lsatter@siu.edu

SECRETARY

Dave Gillespie (Region 2)
Chatham, IL
217/494-6982
dandgisp@aol.com

Interim TREASURER

Mike McMahan (Region 4)
Vienna, IL
618/977-3415
mcmahan3465@hotmail.com

IMMEDIATE PAST PRESIDENT

Joe FitzSimmons (Region 4)
Vienna, IL
773/852-7120
fitzsimmonslawoffice@gmail.com

PROGRAM COORDINATOR

Zach DeVillez
Makanda, IL
618/8410932
ilforestry@gmail.com

Regional Directors

Region 1

Bill Fern
Chicago, IL
773/551-5561
bill@billfern.com

Lydia Scott
Lisle, IL
630/719-2425
lscott@mortonarb.org

Tom Walsh
Durand, IL
815/248-2234
walsh10@stateline-isp.com

Region 2

John Lovseth
Jerseyville, IL
618/374.5291
John.Lovseth@principia.edu

Lee Rife
Springfield, IL
217/652-2634
Lee.Rife@comcast.net

Kevin Bennet
Hopewell, IL
618/954-0113
kbennett@treesforever.org

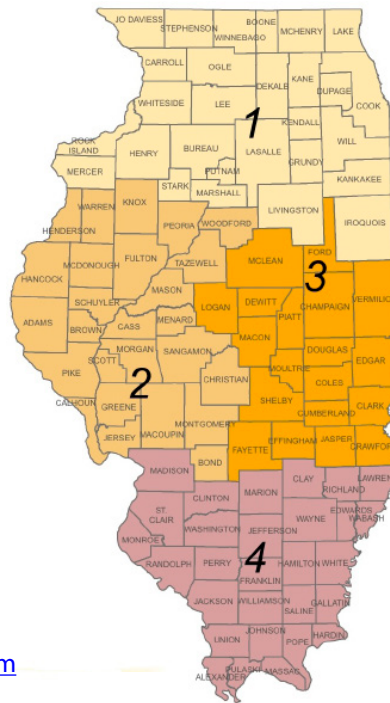
Region 3

Stan Sipp
Mansfield, IL
217/714-1855
sklipp@illinois.edu

John Edgington
University of Illinois (Retired)
217/840-5162
johnedg@illinois.edu

Region 4

Roger Smith
Benton, IL
618/927-2057
smithtreefarmllc@hotmail.com
Bill Buechel
Highland, IL
904/480-0006
wmjbuechel@yahoo.com



IFA Technical Advisors

Chris Evans (Chair)
University of Illinois
Extension Forester
618/695-3383 (office)
cwevans@illinois.edu

Wade Conn
State Forester, USDA-NRCS
217/353-6647 (office)
wade.conn@il.usda.gov

Paul Deizman
IDNR Forest Resources
217/782-3376 (office)
paul.deizman@illinois.gov

John Edgington
University of Illinois (retired)
217/840-5162
johnedg@illinois.edu

Jay Hayek
University of Illinois
Extension Forester
217/244-0534 (office)
jhayek@illinois.edu

Stan Sipp
Forester
217/489-9003
sklipp@illinois.edu
Gary Stratton
Forester - Retired IDNR
618/736-2854
stratton@hamiltoncom.net

Chris Whittom
IDNR Forest Resources
217/785-8264 (office)
217/280-3659 (cell)
chris.whittom@illinois.gov

Our Mission...

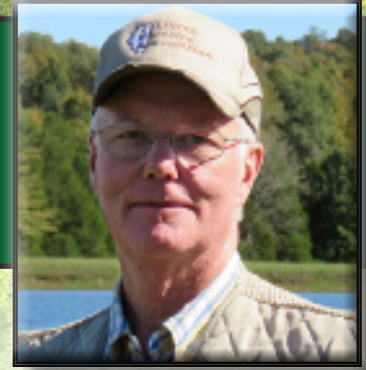
"to act on issues that impact rural and community forests and to promote forestry in Illinois."

Our Goals...

- Promote forest management and help landowners manage their forests
- Educate members and the general public about rural and community forestry
- Advocate for favorable legislation and policies to benefit/protect landowners managing their forests
- Understand and engage our members, and increase IFA membership
- Govern the IFA efficiently and effectively to better serve our charitable mission

<https://ilforestry.org>

Message From the IFA President



Dear IFA members,

I am writing this brief message to you because I am starting to get concerned about the status of our membership numbers. There are a couple of results from our declining membership totals – the first being financial. Believe it or not, this is NOT my primary concern. Although our total assets have declined somewhat over the last couple of years, we are still solvent and have sufficient funds available to us to meet our current goals.

My big concern is related to our actual membership composition. Today, we are made up primarily of folks who are “over 50” – in other words, “seniors”. This does not bode well for our future. We need to capture the hearts and minds of our younger people – our children, grand-children, young couples who just bought the property next door to us or who live “down the road”. The primary focus is their age. Granted there are some young people who could care less about our forests and whether or not they are even there when they reach our age – but I believe these young people are well in the minority.

Most of us, regardless of our age, truly DO CARE about what life will be like in 2040 – the issue before us is that we have to do something NOW if we expect anything to change.

This brings me to our Gift Membership program. Previously, I have discussed this with you in the context of giving gift memberships to your family members. I mentioned the idea of planting a seed in their heads that will, hopefully, lead them to care as much as you do about your forests. Many of you have done this and I appreciate it.

Now, however, I believe we need to move to the next level and really take a bold step. I invite you to send IFA a check for \$30 which will pay for a gift membership for a young student – either high school or college -who is currently unknown to any of us. We will reach out across the entire state to identify potential young people and simply send them a gift membership.

If history repeats itself, many of these who receive a free membership for the first year will renew their membership and pay for it themselves.

Here is the bottom line impact – If we each did this, our membership would double over-night. In a year, our membership would not have continued its decline but would be approximately 60% - 75% greater than it is today. If we “did this again” at that point in time, the following year things would be even better for our forests – which is, after all, the primary reason IFA exists in the first place.

“Someone’s sitting in the shade today because someone planted a tree a long time ago”.
- Warren Buffet



The IFA to Collaborate with Touch of Nature, SIU to Hold Field Day

- Sarah Kachinovas - SIU Forestry Student and Project Worker

Touch of Nature was the beginning of my time in Carbondale and it means so much to me that I've been able to put my studies to work in a place that gave me such a strong start. I've gotten to work with some familiar tools and techniques in TSI as well as getting more familiar with larger equipment. One of the most essential pieces we've been using is the masticator, this 3000 lb. head has been responsible for the majority of the understory's clearance (under some good supervision of course). My primary work has been cutting, treating, and dragging in areas where the masticator cannot reach. I've been working with loppers handsaws, chainsaws, pole saws and a handful of really good people to eradicate the abundance of honeysuckle, autumn olive, shrub and vining species that prevent these areas from reaching their maximum potential both in terms of productivity and educational access. It's incredible to actually be able to walk through the stand after clearing it and think of what it's going to look like in a few years.

This year the Illinois Forestry Association will be collaborating with Touch of Nature Environmental Center to conduct a non-native invasive species removal project. This project will focus on using brush cutting machinery (a forestry mower) to clear forested areas overtaken by autumn olive and bush honeysuckle.

These forest stands contain a thick density of woody invasives. It would take a significant amount of time and manpower to remove the invasives with chainsaws. For this reason, mechanical control with a forestry mower can be considered one of the most effective management tools to control woody invasives at Touch of Nature Environmental Center.

Why put so much effort into eradicating autumn olive and bush honeysuckle? Non-native invasive species have a tendency to "take over" areas. They dominate space in the lower canopy. This means less sunlight and space for native species to establish and thrive.

Comments About the Project

- JD Tanner – Director, SIU's Touch of Nature Environmental Center

- Tom Brummer - Assistant Director of Facilities and Operations, SIU's Touch of Nature Environmental Center

We are very excited to be teamed up with the Illinois Forestry Association in creating a demonstration site at SIU's Touch of Nature, for invasive plant management practices. Through a generous grant from the Illinois Forestry Development Council, we are able to provide demonstration plots for proven forestry management practices. This provides valuable information to forestry professionals, private landowners and educational programming at Touch of Nature. The change that we have witnessed in the forest in such a short time has truly been amazing. This project will provide a better experience for our customers/campers, and will provide long-term educational benefits.

Mechanical Control of Woody Non-Native Invasive Species Project at Touch of Nature Environmental Center



Native Shrubs for the Home Landscape, It's for the Birds

by Kevin Rohling
Forestry Research Technician
University of Illinois Extension

Many native shrubs for the home landscape provide habitat for wildlife and improve overall character of your space, whether that includes a forested tract, open space, or a smaller yard. There are many pitfalls to avoid (or rectify) and there are smart choices that enhance the landscape for wildlife and esthetics that we all enjoy. Native plants are particularly desirable to local wildlife when compared to non-native species, so planting a native plant will almost always benefit more wildlife species as opposed to planting a non-native plant.

Wildlife benefits from native shrubs due to a number of resources they provide. To start, native shrubs provide habitat for insects. While the benefit of floral resources for pollen and nectar is important, another often overlooked benefit is the potential for host plants to various species of butterfly and moth caterpillars. For more information on the benefits of using native plants to benefit wildlife, see Doug Tallamy's website (<http://www.bringingnaturehome.net/>) or his book, *Bringing Nature Home*.

Not all non-native plants become invasive, and some non-native plants are fine for the home landscape, but invasive plants are an enormous problem for anyone who uses or appreciates natural resources. Invasive species are a problem not only for our landscaping (who wants to continually remove those unwanted pests!?), but also for surrounding areas once their offspring are transported by the wind, water, wildlife, people (inadvertently or intentional),

or spreading through roots or rhizomes. So, it is best to avoid using those plants. Many invasive shrubs are well-known, and several are illegal to spread, such as bush honeysuckle (*Lonicera maackii*) and autumn olive (*Elaeagnus umbellata*). Some species are less well known but you should also avoid them despite their being offered for sale at many retail outlets.



Figure 1: Autumn olive

A few shrubs that are invasive, but may still be available commercially, include privet (*Ligustrum* spp., several species), heavenly bamboo (*Nandina domestica*), leatherleaf mahonia (*Mahonia bealei*), barberry (*Berberis* spp, several species), burning bush (*Euonymus alatus*), and callery pear (*Pyrus calleryana*).

Privet (Chinese, European/common, border, and others) has been recently invading natural areas across the state. Leatherleaf mahonia is another species I have seen in some home landscapes and subsequently in adjacent natural areas in southern Illinois. Heavenly bamboo is another species typically invading southern states, but has escaped in Missouri and appears frequently in Illinois

landscaping. Burning bush is a very common landscape plant that has highly invasive tendencies. Generally considered a small tree, the ubiquitous callery pear, is sold under many different names and varieties (Bradford, Aristocrat, Autumn Blaze, Capital, Cleveland Select, and more, if it is an ornamental pear, it is likely a callery pear). All varieties of callery pear have the potential to escape and become invasive.



Figure 2: A callery pear
Photo by: Richard Gardner,
Bugwood.org

There are many excellent native shrub alternatives and there are many resources available for the landowner to determine which will be most desirable and suitable in your area. One resource I've found to be particularly useful to those wishing to support wildlife with their selections is the Native Plant Finder website (<https://www.nwf.org/nativeplantfinder/>). The Native Plant Finder generates lists of plants that are locally native based on the zip code you enter. In addition, the website also calculates the number of known butterfly and moth species that use those native plants as hosts for their caterpillars.

I'll highlight a couple native shrubs that are relatively adaptable and occur throughout Illinois, but I encourage you to do some of your own research and find some additional species that conform to your site characteristics and personal preferences.

American hazelnut (*Corylus Americana*) can grow to be 4-15 foot tall. It prefers full sun to light shade, and moist to dry-mesic and loamy, sandy, or rocky soil but is adaptable to a range of environmental conditions. Some of the interesting features include catkins that develop in the summer and remain over the winter into the spring giving this shrub some winter interest. The hazelnuts themselves are initially enclosed inside two green protective bracts that turn brown as they ripen towards the end of summer. While American hazelnut is monoecious (it has both male and female flowers on the same plant), they are self-incompatible, so you will need at least two to cross-pollinate if you want to have viable nuts.



Figure 3: American hazelnut
Photo by: Richard Webb,
Bugwood.org

The wildlife value of American hazelnut is high. It is a host plant to over one hundred species of butterflies and moths, the caterpillars of which serve as food sources for countless songbirds and other wildlife. In addition, there are several birds and quite a few mammals that will use the plant directly, such as red-bellied woodpecker that eat the nuts, and a number of birds are known to use it for nesting sites and cover.

Another adaptable native shrub found across Illinois is the common elderberry (*Sambucus canadensis*). Common elderberry is deciduous and grows 4-12 feet in height. It prefers full to partial sun and moist fertile loamy soils. It is a clonal plant that spreads through its root system and can be cut back each year and could be a good screen or hedge row plant. This plant has very attractive foliage, spring blooms, and beautiful deep purple berries. Common elderberry is known to be a host plant to around thirty species of butterflies and moths and countless pollinator species will use its blooms. In addition, some native bees will use the stems of this shrub for nesting. The berries are also consumed by a suite of songbirds, mammals, and even some turtles.



Figure 4: Common elderberry

Some additional possibilities depending on your site's characteristics may include: Eastern wahoo (*Euonymus atropurpureus*), Hearts-a-Bustin', aka strawberry bush (*Euonymus americanus*), spicebush (*Lindera benzoin*), prickly ash (*Zanthoxylum americanum*), wafer ash (*Ptelea trifoliata*), possumhaw (*Ilex decidua*), native viburnums (*Virburnum* sp.), native dogwoods (*Cornus* sp.), and many more.



Once you've done your research and decided on some native shrubs to add to your landscape, there are many options for finding local and online vendors. Some local organizations hold native plant sales, such as the Illinois Native Plant Society and Wild Ones! groups. In addition, many companies offer online ordering and can ship directly to your door. See my presentation on the same topic in greater detail and with more ideas at: <https://youtu.be/9wMoquBVMYE> Happy planting!



Figure 5 & 6: A zebra swallow tail and red-bellied woodpecker. Two species you can support with native plants.

Figure 6 photo by Johnny N. Dell Bugwood.org

A Private Landowner's Experience with Non-target Herbicide Drift and Tree Mortality

by A Concerned Private Landowner

This is a summarized account of an Illinois Private Landowner's personal experience with wide-spread tree decline and mortality. This is offered to you as an informative piece. In no way does this article intend to place blame on any individuals or parties, but simply outlines the timeline and factors involved with the unusual deciduous tree decline and mortality documented on two rural properties in Randolph County in Illinois.

It all began in 2015, when a private landowner began observing abnormal foliage damage on trees within his properties. He then began to diligently document/ photograph the damage over time. It was then discovered that this private landowner's property was not the only property containing trees with these symptoms. Through sampling and analysis conducted by representatives from the Illinois Department of Natural Resources, as well as the Illinois Department of Agriculture, it was determined that leaf samples taken from separate trees within four different rural properties in Randolph and Monroe counties contained traces of the organic compound 2,4-Dichlorophenoxyacetic acid (2,4-D). In addition, some of these samples also tested positive for the compound Dicamba.

This tree damage was observed from 2015-2019. Within that time period multiple trees began to show symptoms of widespread decline. Documentation of the damage on two properties from 2016 through 2019 confirmed an unusual number of valuable hardwood trees dying prematurely, following exposure to non-target herbicide drift.

What the Private Landowners Observed:

- Foliage damage observed and documented in Randolph and Monroe Counties as well as multiple counties throughout the state beginning in 2015 and continuing into 2019.



Figure 1: Foliage damage observed on a hickory within property 1, symptomatic of herbicide exposure.



Figure 2: Foliage damage observed on a dogwood within property 2. Upward leaf cupping indicative of herbicide exposure

- Foliage damage observed occurring in the months May-September.

What the Private Landowners Observed:

- Foliage damage spanning multiple species of trees and shrubs.



Figure 3: Foliage damage to a white oak within property 2



Figure 4: Red oak foliage damage within property 2



Figure 5: Hickory foliage damage within property 2

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- Increased mortality rate of trees in both the year of acute herbicide exposure as well as the years following exposure.

- Mast producing trees (walnut, oak, hickory) with severely disfigured foliage were unable to produce fruit. This was observed on three separate properties in 2017 and 2018.

Tree Mortality Data Property 1:

- Property 1 is a 33 acre parcel with approximately 12 wooded acres.

- 24 documented tree deaths (2016 – 1, 2017 – 5, 2018 – 5, 2019 – 13) (Species included white oak, red oak, elm, and ash).
- Estimated average age of trees – 107 years. Estimated cumulative years of growth – 2,560 years.

Tree Mortality Data Property 2:

- Property 2 is a 73 acre parcel with approximately 54 wooded acres.

- 17 documented tree deaths (2017 – 7, 2018 – 5, 2019 – Additional trees died in 2019 but have not yet been documented). (Species include white oak red oak, and hickory).
- Estimated average age of trees – 109 years. Estimated cumulative years of growth – 1848 years.



Figure 7: Red oak foliage sampled by an IDOA representative



Figure 6: Thinning canopy of white oaks within property 2 (loss of foliage density)

Sampling and Analysis Results:

Sampling and analysis confirmed the presence of the compound 2,4-D in each of twelve foliage samples taken from 4 rural properties (four in 2017, four in 2018, and four in 2019). Of those samples, four also tested positive for dicamba (one in 2018, and three in 2019).

IDOA Pesticide Incident Investigations:

In three Pesticide Incident Cases (Two in 2018, and one in 2019), IDOA investigations indicated that a low volatility formulation of 2,4-D ester was the suspected source chemical for the off-target foliage damage observed and documented on two rural properties in Randolph county.

What the Private Landowners Suspect:

- Off-target herbicide exposure is a significant contributing factor to the abnormal death of the trees documented on the two properties.

- The timing of herbicide exposure relative to leaf development appears to be critical to the extent of foliage damage caused by the herbicide.

In 2017, when the private landowners' suspected that the damage was not isolated to their counties, they began to discuss their findings with other individuals in an effort to urgently resolve their problem. Since then, they have shared information with the Illinois Forestry Association, IDNR, IDOA, Illinois Farm Bureau, University of Illinois Plant Sciences Department, EPA, IEPA, local farmers, local applicators, other affected landowners, chemical representatives, and individuals from universities in other states.

The focus of these private landowners' is to eliminate additional damage and loss of valuable trees by focusing on the problem—not the blame. To date they have gathered significant data that should prove valuable in helping to determine a solution. At this point they don't have all the answers nor do they claim to know everything. However, they thought it would be important to share this information with the Illinois Forestry Association members, in an effort to help resolve this serious threat to our trees and forested lands.

Larue-Pine Hills Snake Road Migration

By Scott Ballard

IDNR E&T Recover Specialist/Herpetologist



"One of the most beautiful, unusual, and outstanding natural areas in Illinois is Pine Hills and the adjacent La Rue Swamp in Union County". This was stated by Robert Evers and Larry Page in their 1977 publication "Some Unusual Natural Areas in Illinois". The LaRue-Pine Hills Ecological Area comprises 2,811 acres, and is the most herpetologically diverse area in the Midwest, if not most of North America. The first herpetofaunal study of the area was done by Douglas Rossman in 1960, where he listed 56 species of amphibians and reptiles as occurring there. This comprises over half of Illinois' approximately 100 species of herpetofauna.



Figure 1: A juvenile cottonmouth exhibiting yellow tail tip used to lure prey.

The LaRue-Pine Hills area lies at the boundary of two herpetofaunal divisions, as recognized by Phil Smith in 1961—the Shawnee Hills and Austroriparian divisions. The Shawnee Hills Division include the bluffs and rock outcrops. It is the southern extent of many northern species' range. The La Rue Swamp

is within the Austroriparian Division and includes the swamp, Otter Pond, and Wolf Lake. It is the northern extent of many southern species' range. The convergence of these two divisions make this area very diverse. Running between these two herpetofaunal divisions is Forest Road 345.



Figure 2: A green tree frog on a branch extending over Larue swamp.

The area has drawn a lot of attention from what Forest Service began doing in 1972 to proactively manage and protect the herpetofauna. Forest Road 345, as it runs between these two herpetofaunal divisions, is approximately 2.5 miles in length. After installing gates at both ends of the road, the Forest Service began closing this section of road for three weeks each spring and fall to allow the amphibians and reptiles to migrate safely across from the rock outcrops to the swamp, and then back again. These seasonal movements from one area to the next are triggered by photoperiod (day length) and temperatures. In the spring, as the photoperiod increases and temperatures begin rising, the

herpetofauna begins to move around and migrate to foraging areas. In the fall, as the photoperiod decreases and temperatures get cooler, the herpetofauna stop feeding and begin their movements back to those rock outcrops where they'll stay all winter long.

As an undergraduate at Southern Illinois University Carbondale, I assisted Dr. Ronald Brandon with a survey of the Mississippi green water snake in the LaRue-Pine Hills area. That work was continued as my Masters research. In my thesis, the recommendation was made to lengthen the seasonal closure of Forest Road 345 from three weeks each spring and fall to two full months each spring and fall. The Forest Service took that recommendation and incorporated it into the management of the area. Now the seasonal road closures are March 15 through May 15 in the spring, and September 1 through October 31 in the fall. During periods of warmer springs and extended warmer falls, the Forest Service has been very diligent in adjusting the road closure dates to accommodate the herpetofaunal movements.

During road closure, visitors are welcome to walk the road to observe the diverse herpetofauna of this unique area. While the large majority of visitors are respectful of the area and its assemblage of creatures, there are some individuals that come to illegally collect and harass the

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snakes. With both the Forest Service and Illinois Department of Natural Resources now jointly enforcing the "collections prohibited" law at LaRue-Pine Hills, it has reduced the issues, however cases are still made each spring and fall there.



Figure 3: A copperhead basking in the sunlight.



Figure 4: An extremely colorful cricket frog.



Figure 5: A timber rattlesnake found in the forest off of snake road.

The most commonly encountered and easily seen species there is the western cottonmouth. Because of the area drawing so many visitors to see this area where the road closure proactively protects migrating snakes, it has also been dubbed "Snake Road" and is quite popular on social media. Three of the four venomous species of snakes in Illinois can be observed there, and 20 of the State's 36 non-venomous species of snakes, as well as several turtle, lizard, salamander, frog, and toad species.

If you decide to come walk the road and see the diversity yourself

please dress appropriately. Good leather footwear and long jeans are recommended, as some of the snakes remain motionless as you walk near them. If you step on any snake, it will probably bite. Snakes are not aggressive, but can be defensive if you step on them, try to catch them, or harm them. Leave them alone and they will leave you alone. Possession of any collecting equipment is illegal. The Forest Service and Illinois Conservation Police will write citations for having those on your person while in the area. The walk itself can be long but the terrain is very easy on the feet, and it's a good way to spend a day in nature!!



Figure 6: A Mississippi green water snake laying out on snake road.



Figure 7: Young adult cottonmouth crossing Snake Road and gaping mouth as defensive posture.

What the Illinois Arborist Association is All About

by Norm Hall

Past President, Tree Worker Trainer



The mission of the Illinois Arborist Association is to foster interest, establish standards, exchange professional ideas and pursue scientific research in arboriculture.

The Illinois Arborist Association (IAA) is a Chapter of the International Society of Arboriculture (ISA). Arboriculture is defined as "The cultivation of trees and shrubs." An arborist is defined as "A specialist in the cultivation and care of trees and shrubs, including tree surgery, the diagnosis, treatment, and prevention of tree diseases, and the control of pests." The IAA has three sectors of arboriculture. The Commercial sector, the Municipal sector and the Utility sector. The commercial sector are the arborists who care for trees, shrubs and evergreens on private, commercial and industrial properties. The Municipal sector cares for trees along parkways and on City property. The utility sector prunes and removes trees in close proximity to power lines.



Figure 1: A tree climbing training session

One of the main focuses of the IAA is keeping our arborists up to date on safety and training. Topping the list as the Most Dangerous Occupation in North America, this has been a major focus. The IAA has an "Advanced Training" program to help educate its members in various topics with safety being the primary focus in each course. The Illinois Arborist Association is one of the very few Chapters of ISA to offer Advanced Training to its members. There are four Domains available with multiple topics for each Domain to choose from. Each Domain has four or five required courses and multiple elective courses. The Domain choices are: Tree Worker, Tree Site and Selection, Pest Diagnosis and Management, and Urban Forestry.

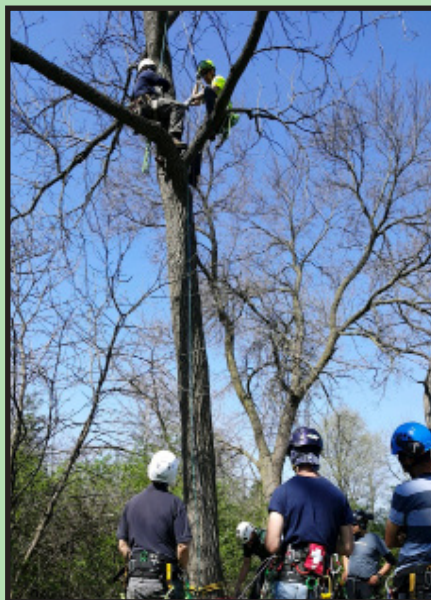


Figure 2: Aerial rescue training

Tree Worker is for the "at height" arborist, whether it be a rope and harness climbing arborist or aerial lift arborist. The topics range from Climbing to Rigging to Felling to Pruning. Tree Site and Selection is for the arborist looking for Tree, Shrub

and Evergreen ID, both in the summer and winter; Planting; Shrub and Evergreen ID, both in the summer and winter; Planting; Soil and Nutrient Management; Site Selection and Design.



Figure 3: Tree pruning training session

Pest Diagnosis and Management deals with plant health care. Whether it be Insect and Mites; pathological diseases; abiotic problems; pesticide safety and application, all are covered. Urban Forestry is for the arborist working in the urban setting. Topics include: Urban Forest Management; Tree Inventories; Tree Regulations and Legislative Concerns; Tree, Shrub and Evergreen Appraisals; Public Relations and Community Outreach.

Every year the IAA has an event we call "Day of Service". A gathering of tree workers from various companies, municipalities and individuals who perform work pruning and removing trees and shrubs to make a site safer and more presentable to the public. At our last year's Day of Service, we did an estimated \$30,000.00 worth of tree work at The Farnsworth House, a National Historic Landmark.

To learn more, visit our website at illinoisarborist.org

Wood Spalting in Nature

by Tom Atkins
Forestry Technician

Earlier this year, while tending the wood stove boiling down maple sap, I was flush with time for thinking. I delighted in the variation of hardwood logs I was splitting and couldn't help but admire their nature. Boxelders and poplars offered rainbow hues while maples, ash and oak held vivid black lines cutting across their grains. Many of us are familiar with the great variation in wood grain, and extractive heartwood colors of each species, but what I was noticing was beyond the scope of the trees formation. Splotched shades of the rainbow and longitudinal stains defied the nature of the wood development and seemingly appeared at random. The dark blue to black lines were inconsistently found in half of a split log but not the other; what were the causes? This trivial fodder burned quickly in the stove but glowed long in my thoughts in this quiet time of year, and the influences of wood coloration turned out to be well worth investigating.



Figure 1: Purple and blue colored hues in poplar

To be clear, I am not referring to the inherent coloration of heartwood and sapwood; instead these colorations are influenced by abiotic or biotic factors of the environment in which the tree grew. This includes

three main types of wood coloring; mineral, chemical and fungal.

Chemical staining is generally a superficial result of oxidative contact with metals from objects grown into trees, ammunition, or bands and staples used in mills. These often result in small blue-ish flecks or streaks, but can easily be removed with chemicals or planing with little wood-loss. Not so easily replaced are the many dulled or damaged saws and many logs abandoned by mills after discovering these tell-tale blue specks.

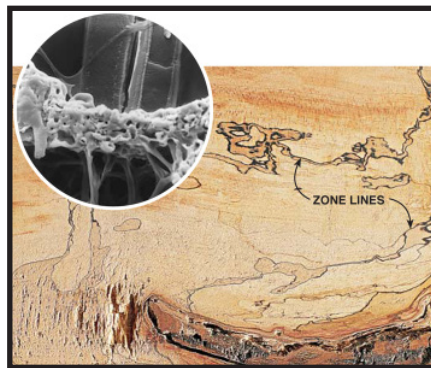


Figure 2: The formation of zone lines as a result of spalting

Mineral staining is influenced largely by the site characteristics in which the tree was growing. Water availability and mineral make-up of the soil are the most readily available explanation for this phenomenon. Moist sites are generally cited as influence for darker staining. Examples can be seen in Poplar, Maple, Oak, Beech and Hickory as streaks or tree-long bands of blueish blacks, browns, greys and greens as well as various shades of pink. Though permanent, this staining fades slightly but can be preserved with UV finishes to retain the color expression. Lumber producers may discount stained wood, but is

cherished by many wood workers for various projects incorporating long board sections.



Figure 3: Spalted wood can add unique character to woodworking products

Fungal staining is by far the most frequently observed type of wood discoloring, commonly referred to as "spalting". It is apparent that the majority of spalting comes as a result of resource competition between fungi. Numerous wood-decay fungi exist, but a few main types are associated with spalting, each relative to dead or dying trees. White rots consume color rich lignin, leaving behind a bleached appearance and the creation of zone lines. These zone lines are deposits of mostly melanin that act as physical and chemical barriers, often as a form of resource capture when fungal colonies meet. Perhaps you've seen this in a hand-turned bowl or ornament as black zig-zagging lines. Another form of nutrient safeguarding is exhibited in staining fungi. These fungi are found in the sap wood where hyphae (fungal root structures) deposit various pigment compounds that permanently stain the wood fibers. We see these commonly as blue staining in softwoods and green, pink and orange staining in hardwoods. These fungi can infect wood indirectly through wounds or can hitch-hike on the backs of insects including ambrosia beetles. Often times fungal zone lines will encircle beetle entrance and exit holes or beetle galleries.

Spring Morel Hunting in Illinois

by Zach DeVillez



Spring is a beautiful time to enjoy recreational activities in an Illinois forest near you. The forest is alive again, teeming with new green foliage and wildlife. For many nature enthusiasts, spring is the time to start the hunt, the hunt for wild mushrooms that is.

When embarking on a mushroom hunt for the first time, it can be frustrating. Knowing where to look for certain species is half the battle. Different fungi prefer different soil, and microclimate conditions. To find these favorable microclimate conditions, mushroom hunters generally rely on site indicators like specific species of trees and vegetation.

This article will explore hunting one of the more popular edible mushrooms in Illinois, the morel.

Morel Madness

Not many mushrooms can compete with the popularity of the elusive morel mushroom. Every spring, morel hunters make for the forest to find this delicious fungi.



Figure 1: Baskets full of yellow, and half free morels

There are three major species you can find in Illinois. Black morels arrive first, followed by yellow morels and half free morels two - three weeks later. Morels have been found as early as March, and as late as July.



Figure 2: A black morel (*morchella elata*)
Photo by: Chris Schnepf

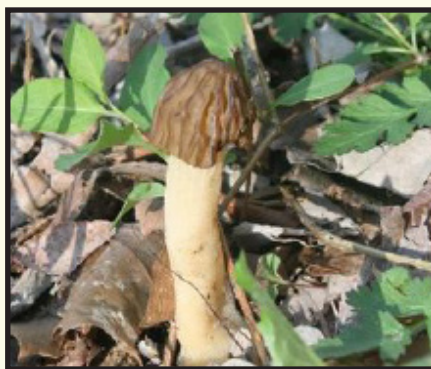


Figure 3: A half-free morel (*Morchella semilibera*)



Figure 4: A yellow morel (*Morchella esculenta*)

It can be frustrating to find your first morel. Any seasoned morel hunter will be hesitant to share their hunting locations with you in fear that others will beat them to their secret spot. For this reason to find your first morel it can be helpful to focus on site characteristics and site indicators.

In terms of site characteristics, drainage areas, poplar forest, ash trees, and dead elms are well known locations where morels can be found. Mayapples are a useful site indicator that can help you know you're searching in the right habitat for morels. Morels can be difficult to see against leaf litter on the forest floor. Many hunters claim they had to train their eyes to be able to spot morels.

Morels start appearing when soil temperatures reach 55 degrees and cease appearing at 62 degrees. They often appear after a significant rain event. Morels are often found in groups, so when you find one you are likely to find more close by.

As with all wild mushrooms, make sure to thoroughly cook all mushrooms. Eating raw morels can make you sick. There are false morel mushrooms that can be mistaken for morels. These mushrooms can be toxic, so make sure to positively identify any fungi you plan to consume.

Happy Hunting!

The Insects That Impact Forest Health

by Zach DeVillez

Emerald Ash Borer



© Debbie Miller, USDA Forest Service, Bugwood.org

Ash Trees in Decline

Emerald Ash Borer (EAB) is a non-native invasive wood boring beetle that was found in Detroit, Michigan in 2002. This beetle is native to China and Eastern Asia.

In the United States this beetle is killing ash trees at a rapid rate. All of the ash species in Illinois are susceptible to emerald ash borer including green and white ash.

Adult emerald ash borer beetles lay their eggs in bark crevices of ash trees. The larvae then feed on the phloem and cambium of ash trees. This is the living, growing part of a tree that transports nutrients and water between the crown and roots of the tree. With the disruption of this vital biological function in the trees, tree health declines and usually ends in mortality in 2-3 years.

EAB has been found in the majority of Illinois counties. While EAB has not been trapped in some southern counties, this beetle will soon have presense throughout the entire state.

Asian Longhorned Beetle



© Kenneth R. Law, USDA APHIS PPQ, Bugwood.org

Controlled but Not Forgotten

The Asian Longhorned Beetle is another non-native wood boring insect from Asia. It was first discovered in Chicago in 1998.

The asian longhorned beetles can be extremely destructive to a variety of tree species including maples, sycamore, horse chestnut, birch, willow, and american elm.

Females chew oval depressions in tree bark to lay their eggs. The larvae then feed on the phloem and cambium in trees. Like EAB, this insect disrupts the transportation of nutrients and water within trees which can lead to mortality by girdling.

The Illinois Department of Agriculture announced eradication of ALB in 2008. However, there are active infestations in other states, so a return is always possible. If you see this insect, collect the specimen in a jar, freeze it, and contact the Illinois Department of Agriculture.

Spotted Lanternfly



© Lawrence Barringer, Pennsylvania Department of Agriculture, Bugwood.org

A Serious Concern

Spotted Lanternfly is a non-native invasive plant hopper that is native to Southern Asia. It was first found on American soil in Pennsylvania in 2014, and is still quarantined in that region.

The spotted lanternfly is a sap sucking insect that feeds on stems and foliage of trees. This feeding weakens the host plant making it more susceptible to other tree health issues. The honeydew that the spotted lanternfly exudes can also lead to molds which can further weaken the host.

The preferred host of this species is tree of heaven; a non-native invasive tree. However, these plant hoppers can feed on a wide taxonomic range of tree species. This includes grapes, fruit trees, and nut trees (oaks and hickories).

This non-native invasive species seriously threatens the wine industry, orchard and food crops, and even our natural oak-hickory forests. This insect has serious potential to cause extreme economic loss if it expands outside of its current quarantined range. If you identify this insect, please report it to the experts at the IDOA.

"History of Conservation in Illinois"

Installment #31

by Dave Gillespie, IFA Secretary

This account of the history of conservation in Illinois was written by Joseph P. Schavilje in 1941. This installment begins where installment # 30 ended.

The general history of timber cutting in Alexander County, according to the testimony of those connected with the lumber trade, shows that the Tulip was cut first, and its cutting was most active during a decade extending from 1880 to 1890. This was quickly followed by a period during which the more valuable oak was cut, particularly the white oak. As soon as the larger oak was cut, the smaller was utilized for railroad ties. (Miller and Fuller, 1921) Hardwood lumber production in Illinois in 1869 according to statistics compiled by Albert H. Pierson (1936), was 114 million feet. In 1879 this production was 160 million feet and by 1889 the production of hardwoods was reduced to 97 million feet. The total production in 1899 increased to a new high of 256 million feet, 175 million of which was oak lumber.

(To be continued in the next issue of "The IFA Newsletter")



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Several weeks ago I was privileged to participate in a planning meeting concerning IFA's program of work during the next year. Toward the end of the meeting one of the participants started talking about forests in Europe and how they seem to be connected throughout the land into one seamless forest. These forests were planted many years ago when it became apparent that much of Europe was getting to be treeless leading to a scarcity of lumber. He pointed out that forests and forestry had high status in Germany in particular, something which I had heard from previously from some other people familiar with the topic. I believe that several European countries require two or more new trees to be planted in the same area that a mature tree is cut down. This is to assure that the forest will continue.

The speaker said that where he was stationed in the Air Force near Stuttgart, you could walk from your apartment a short distance and be in a forest which continued throughout the city and even to the next town. Moreover all trees along the path were labeled with both the common

and scientific name, along with other pertinent information to educate the public as well as scholars as to the value uses of this particular species of tree. Again, I have heard this from others as well.

This set me to thinking. Swiss scientists have said that sufficient numbers of trees planted to replace those cut in recent decades could go a long way in reducing the amount of carbon dioxide which is being blamed for causing global warming and climate change. The number needed is mind blowing, and would be difficult to achieve. However, it would not be impossible and if looked upon as just a part of the answer along with some of the other proposals it would be very achievable. Reforestation can be the answer to much of the flooding which we have seen in recent years, soil erosion from wind and water and helping clean the air. However, it will take a concentrated will to accomplish. I am not thinking of huge tree plantations like we see in many of the Southeastern states, but just plantings along streams, windbreaks restored along fields to

stop wind damage (along with good conservation practices such as cover crops and the use of wood chips (called bio reactors) to remove nitrates from drainage tiles. All of this is a start. Other practices will come as we learn more about integrating sound science into preserving and improving the health of our soil. I just think that more trees have a role to play in sound soil conservation and management here in Illinois. Will you join me in this conversation?

***"The creation
of a thousand
forests is in one
acorn"***

- Ralph Waldo Emerson

Shawnee National Forest

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than you think.

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Peoria - 222 miles
Effingham - 130 miles
Belleville - 64 miles



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Spring Wildflower Identification

Photos courtesy of Chris Evans



Virginia Bluebells
(*Mertensia virginica*)



Virginia Spring Beauty
(*Claytonia virginica*)



Purple Trillium
(*Trillium recurvatum*)



Wild Columbine
(*Aquilegia canadensis*)



Dutchman's Breeches
(*Dicentra cucullaria*)



Wild Blue Phlox
(*Phlox divaricata*)



Jacob's Ladder
(*Polemonium reptans*)



Dwarf Larkspur
(*Delphinium tricorne*)



Small Yellow Lady's Slippers
(*Cypripedium parviflorum*)

Forestry District Offices

August 2019

Paul Bane
Mississippi Palisades SP
16327 IL Rt. 84 N
Savanna, IL 61074
815-273-2768
Paul.Bane@illinois.gov

Wade Bloemer
Stephen Forbes SP
6924 Omega Road
Kinmundy, IL 62854
618-547-3477
Wade.Bloemer@illinois.gov

Steve Felt
1510 46th Ave
Rock Island, IL 61201
309-788-0419
Stephen.Felt@illinois.gov

David Griffith
Chain O Lakes SP
8916 Wilmot Rd
Spring Grove, IL 60081
815-675-2386
Dave.Griffith@illinois.gov

Mark Koch
Eldon Hazlet SP
20100 Hazlet Park Rd
Carlyle, IL 62231
618-594-4475
Mark.Koch@illinois.gov

Mark Koch (temporary)
World Shooting and
Recreational Complex
One Main Event Dr. Suite
140 Sparta, IL 62286
618-295-2877
Mark.Koch@illinois.gov

Scott Lamer
1252 W Washington
Pittsfield, IL 62363
217-285-2221
Scott.Lamer@illinois.gov

Scott Lamer (temporary)
604 E. Franklin
Jerseyville, IL 62052
618-498-1627
Scott.Lamer@illinois.gov

Jenny Lesko
Dixon Springs SP
945 State Hwy 146W
Golconda, IL 62938
618-949-3729
Jennifer.lesko@illinois.gov
Jenny Lesko (temporary)
106 Andrews Dr.
Fairfield, IL 62837
618-847-3781
Jennifer.lesko@illinois.gov

Shane McDearmon
1660 West Polk Ave
Charleston, IL 61920
217-348-0174
Shane.mcdearmon@illinois.gov

Barrie McVey
Argyle Lake SP
640 Argyle Park Rd
Colchester, IL 62326
309-776-5271
Barrie.Mcvey@illinois.gov

Matt Peterson
700 South 10th
Havana, IL 62644
309-543-3401
Matt.Peterson@illinois.gov

Benjamin Snyder
Lake Murphysboro SP
52 Cinder Hill Drive
Murphysboro, IL 62966
618-565-2828
Benjamin.snyder@illinois.gov

Randy Timmons
P.O. Box 860
124 W. William St
Seneca, IL 61360
815-357-8846
Randy.Timmons@illinois.gov

Jim Tresouthick
30550 Boathouse Rd
Wilmington, IL 60481
815-476-0256
Jim.Tresouthick@illinois.gov

